REMARKS/ARGUMENTS

In paragraph 5 of the Office action, claims 1, 2, 4-6, 8-9 and 11-13 are rejected under 35 U.S.C. §102 as being anticipated by either the publication entitled "Fault Simulation and Modeling of Microelectromechanical Systems" (Rosing et al.) or U.S. Patent No. 6,718,823 (Platt) or U.S. Patent No. 6,761,068 (Schmid). In response, claim 1 has been amended to recite that the plurality of sensors are positioned about an axis of symmetry and that circuitry is provided that is responsive to the plurality of sensors for *comparing* the signals produced by the plurality of sensors to identify asymmetries in the MEMS device. It is respectfully submitted that none of the cited references discloses such a structure.

Turning first to Rosing et al., a pressure sensor is proposed which is set forth in FIG. 4. The device has a comb-drive on the right and left sides of the device, as well as four resistors R_1, R_2, R_3, R_4. The four resistors are ranged in a Wheatstone bridge configuration as is seen in FIG. 6. The output of the Wheatstone bridge is the sum of a sine wave voltage at the resonant frequency and a bias voltage. Rosing et al. does not disclose a device in which there are plurality of sensors positioned about an axis of symmetry together with circuitry responsive to compare the signals produced by that plurality of sensors to identify asymmetries in the device.

The reference to Platt discloses a pulse width modulation drive signal for a MEMS gyroscope. The structure of the gyroscope is seen in FIG. 1. The sensors used by the gyroscope are sense plates 152 and 162 which operate as capacitors with the proof masses 122 and 132, respectively. See column 3, lines 32-34. The sense plates produce signals as is known in response to an input signal as well as rotation of the gyroscope about an input axis. The change in capacitance is sensed and used to calculate the Coriolis acceleration of the proof masses. See column 4, lines 44-62. It is not seen how the structure of a gyroscope anticipates the structure currently recited in amended claim 1.

The Schmid reference appears to be cumulative. That is, the Schmid reference discloses a sensor similar to Platt as is seen from the following excerpt:

> When the micromechanical rotation rate sensor shown in FIG. 1 is caused to rotate, as indicated by arrow 32, about an axis which is parallel to the longitudinal direction thereof, the seismic masses 20a and 20b will, due to their antiphase excitation, undergo an antiphase deflection as a result of the Coriolis force; this antiphase deflection can be detected by means of detection electrodes 34a, 34b. Since the left seismic mass 20a is drawn away from the substrate wafer arrangement 12 by the Coriolis force, when the right seismic mass 20b is drawn towards the substrate wafer arrangement, the two electrodes 34a, 34b constitute a differential capacitance detection which is detected via bonding wires 40 by an application-specific IC component 38 and evaluated.

Again, it is not seen how the construction or operation of the rotation rate sensor of Schmid anticipates claim 1.

Independent claim 5 has been amended in substantially the same way as claim 1. That is, claim 5 recites a plurality of fixed beams and movable beams arranged symmetrically. First and second sensors, electrically isolated from one another, are formed of the beams. A circuit is responsive to the first and second sensors for comparing signals produced by those sensors to identify asymmetries in the MEMS device. It is respectfully submitted that claim 5 is believed to be in condition for allowance with respect to 35 U.S.C. §102 for the reasons set forth above in connection with claim 1.

Claim 8 is similar to claims 1 and 5 in that it recites a plurality of sensors positioned about an axis of symmetry. Circuitry is provided which is responsive to the plurality of sensors for real time comparison of the signals produced by the plurality of sensors. It is respectfully submitted that neither Rosing et al., Platt nor Schmid anticipate a claim which recites a plurality of sensors positioned about an axis of symmetry, and circuitry responsive to the plurality of sensors for real time comparison of the signals produced by the plurality of sensors. Accordingly, it is respectfully submitted that claim 8 is patentable with respect to 35 U.S.C. §102.

Independent claim 12 is similar to both claims 5 and 8. Claim 12 recites a plurality of fixed beams and a plurality of movable beams which form first and second sensors as in claim 5. A circuit is provided which is responsive to the first and second sensors for a real time comparison of the signals produced by those sensors as in claim 8. Accordingly, it is believed that claim 12 is in condition for allowance with respect to 35 U.S.C. §102.

Certain of the claims, claims 3, 7, 10 and 14, have been rejected under 35 U.S.C. §103. Because each of those claims is a dependent claim, and the claims from which they depend are now believed to be in condition for allowance, no arguments in favor of the allowability of those dependent claims are currently set forth. Applicants reserve the right to submit arguments in favor of the patentability of the dependent claims at a later date should that become necessary.

Applicants have made a diligent effort to place the instant application in condition for allowance. Accordingly, a notice of allowance for claims 1-14 is respectfully requested. If the Examiner is of the opinion that the instant application is in condition for disposition other than through allowance, the Examiner is requested to contact Applicants' attorney at the telephone number listed below so that additional changes may be discussed.

Respectfully submitted,

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